

1	<b>CONSUMABLE PRODUCTS PRODUCED BY COOLING</b>	616	..Heat exchange with liquid cryogen
3.1	<b>USING ELECTRICAL OR MAGNETIC EFFECT</b>	617	.Separation of gas mixture
3.2	..Thermoelectric; e.g., peltier effect	618	..Natural gas
3.3	..Heat pump, selective heating and cooling	619	...Compression, expansion, and condensation
3.4	..Including dehumidifying and condensate handling	620	...Distillation
3.5	..Made with flexible heat exchanger material; e.g., blanket, wearing apparel, etc.	621	....Flowline expansion engine
3.6	..Interior of enclosure cooled; e.g., refrigerator	622	.....Downstream of column
3.61	...Having vehicle feature; e.g., cooling cart, car, truck, boat, etc.	623	....External refrigeration circuit
3.62	...Portable, having transporting feature; e.g., handle	624	....Membrane
3.63	...Icemaker	625	....Liquid contact
3.64	...Beverage dispenser	626	....Solid sorption
3.7	..Including specific circuitry or heat exchanger material	627	....Dephlemation
4	<b>CHEMICAL REACTION OR SOLIDS DISSOLVING</b>	628	....Automatic control
5	<b>VORTEX TUBE, E.G., RANQUE</b>	629	....Solidification
6	<b>GAS COMPRESSION, HEAT REGENERATION AND EXPANSION, E.G., STIRLING CYCLE</b>	630	....Plural columns
7	<b>UTILIZING FUEL AS REFRIGERANT</b>	631	.....Recycle
600	<b>CRYOGENIC TREATMENT OF GAS OR GAS MIXTURE</b>	632	...Liquid contact
601	..Solidification	633	....Dehydrating
602	..Carbon dioxide	634	....Expansion
603	...Snow	635	....Plural contact columns
604	....Pressed block	636	...Sorption
605	....Extruded pellets	637	...Solidification
606	..Liquefaction	638	....Regenerating heat exchanger
607	..Hydrogen	639	..Helium
608	..Helium	640	..Air
51.2	..Utilizing Joule-Thomson effect	641	...Regenerating heat exchanger
610	...He3/He4 dilution refrigerator (i.e., superfluid)	642	...Filtration
611	..Natural gas	643	...Distillation
612	...Multicomponent cascade refrigeration	644	....Upstream operation
613	...Compression, expansion, and condensation	645	.....Flowline expansion engine
614	...Heat exchange with liquid cryogen	646	.....Spaced initial charging
615	..Air	647	.....Spaced initial charging
		648	....Downstream operation
		649	.....Flowline expansion engine
		650	.....High pressure nitrogen
		651	.....Low pressure nitrogen
		652	.....Oxygen
		653	.....Flowline pump
		654	.....Liquid oxygen
		655	....Membrane
		656	....Automatic control
		657	.Automatic control
		45.1	<b>STORAGE OF SOLIDIFIED OR LIQUIFIED GAS (E.G., CRYOGEN)</b>
		46.1	.With sorbing or mixing
		46.2	..Mixing of substance with hydrogen
		46.3	..Sorbing into capillary material

47.1	.With conservation of cryogen by reduction of vapor to liquid within storage receptacle	536	...Refrigerant remains liquid during cooling
48.1	.With vapor discharged from storage receptacle	537	..Utilizing a constituent of the original mixture or solution as refrigerant
48.2	..And subsequently restored to receptacle as liquid	538	..Solidifying or purifying in a pulsed column or using sonic vibration
48.3	..And subsequently used to cool receptacle	539	...With control of pulsed column process parameter
48.4	..Discharge caused by ignition of combustible gas	540	..With measured parameter responsive control
49.1	.With measuring	541	..With separated constituent recycle
49.2	..Of liquid level	542	..Using melted solid to wash solidified constituent
50.1	.Liquified gas transferred as liquid	543	..With squeezing or compression of solidified component
50.2	..With vaporizing of liquified gas downstream of storage	544	..With stirring, agitating or scraping of the solidification zone
50.3	...Energy converted to work (e.g., used to drive prime mover)	545	...With externally scraped drum or helix or screw
50.4	...Operates valve which controls flow of liquid	59	.Accumulating holdover ice in situ
50.5	...In phase separator	60	.Packaging
50.6	..Specific pump structure	61	.Utilizing motion of vehicle
50.7	..Specific conduit, valve, or coupling structure	62	.Treating an article
51.1	.Including cryostat	63	..Moving through cooling zone during cooling
52.1	.Spraying of cryogen	64	..By contacting with liquid
53.1	.Underground or underwater storage	65	..Diverse sequential temperatures, e.g., precooling
53.2	.Storage in modified vehicle (e.g., ship, truck, etc.)	66	.Congealing flowable material, e.g., ice making
54.1	.Cryogen stored in both phases (e.g., as slush or gel)	67	..With filtering or gravitational separating
54.2	.Controlled conversion of solidified gas to another phase	68	..Agitating
54.3	.Storing solidified gas	69	...Introducing gas, e.g., air
55.5	<b>LOW PRESSURE COLD TRAP PROCESS AND APPARATUS</b>	70	....By injecting
56	<b>PROCESSES</b>	71	..Removing product from congealing surface
57	.Suspending in upwardly directed current	72	...Flexing supporting surface
532	.Fractionally solidifying a constituent and separating the same	73	...By heating
533	..Including direct contact with added refrigerant	74	..Spraying or dripping
534	...Liquid refrigerant converted to vapor phase during cooling	75	..Sequential stages, e.g., composite block making
535	....Spent refrigerant vapor used in direct contact to melt solidified component or heat product liquid	76	.With preliminary refrigerant manufacturing
		77	.Assembling, charging, or repairing of refrigeration producer
		78	.Deodorizing, antisepticizing or providing special atmosphere

79	.Exchanging heat between plural systems, e.g., disparate	110	..With diffusion of refrigerant into inert gas
80	.Defrosting or frost inhibiting	111	...With forced circulation between evaporator and sorber
81	..By utilizing working fluid of refrigeration producer	112	..Utilizing particular refrigerant and/or sorbent materials
82	..By utilizing fluid strange to system	113	.Transferring heat between diverse function portions of refrigeration cycle
83	.Preventing slugging to compressor	114	.Employing diverse materials or particular material in refrigeration circuit
84	.Lubricant handling	115	.Compressing, condensing and evaporating
85	.Separating or preventing formation of undesirables	116	..Utilizing motive energy of fluid to compress
86	.Reducing pressure on compressed gas	117	..Dividing refrigerant flow, e.g., bypass parallel units
87	..Converting energy of expansion to mechanical movement	118	.Pumping fluid in closed circuit
88	...With reheat of gas stream	119	.Condensing and evaporating
89	.Circulating external gas	120	.Spaced cooling steps
90	..With reheating	121	.Gas and liquid contact
91	..With adding of moisture	122	.Combining fluids having diverse temperatures
92	...With removing of moisture	123	<b>SEPARATOR FOR SOLIDIFIED CONSTITUENT OF LIQUID MIXTURE</b>
93	..With removing of moisture	124	.With heater for liquid mixture container
94	...By sorption	125	<b>WITH INDICATOR OR TESTER</b>
95	..Plural cooling, e.g., precooling by exhaust	126	.Operatively correlated with automatic control
96	..Indirect cooling using closed circuit heat transfer fluid	127	.Diverse function indicators or testers
97	..Combining streams having diverse temperatures	128	.Atmospheric condensation accumulation, e.g., frost
98	.Fluid external of refrigeration producing cycle	129	.Condition sensing
99	..Indirect by using heat transfer fluid external of cycle	130	..External cooled material
100	.Vacuumizing an open outlet chamber	131	.Position or extent of motion of movable element
101	.Evaporation induced by sorption	132	<b>AUTOMATIC CONTROL</b>
102	..Using diverse refrigerants	133	.Responsive to vehicle body motion or traction
103	..With modulated flow rate of fluid	134	..Electrical generator
104	...By varying heat input or output	135	.By congealed removable product condition
105	...Varying non-refrigerant fluid flow	136	..By change of consistency, e.g., viscosity or overrun
106	..Intermittent operating of generation and sorption cycle	137	..By accumulation of product
107	..With absorption liquid circulation aided by system generated pressure	138	...On heat absorber
108	..With liquid refrigerant transfer to evaporator against gravity	139	.By accumulation on freezing surface, e.g., ice
109	..Cooling by evaporation of refrigerant from sorption solution	140	..By frost, i.e., atmospheric condensate
		141	.Of closed system sorbent type

142	..Discontinuous operation of refrigerant or sorbent container unit	174	.Trapping and discharging refrigerant batches
143	...Of intermittent generator-sorber unit	175	.Diverse, cascade or compound refrigeration-producing system
144	....Plural unit sequence or alternation	176.1	.Humidity sensor
145	.....Serially connected type	176.2	..Having defrost control related to humidity
146	....Of cooling fluid	176.3	..Controlling variable compressor capacity
147	.....Including sorbent refrigerant flow	176.4	..Controlling gas-liquid contactor for air
148	..Of heating means	176.5	..Control of air heater, e.g., reheat pump
149	.Withdrawing or adding refrigerant from or to normally closed system	176.6	..Plus air temperature sensor exerting a control
150	.Preventing, removing or handling atmospheric condensate	177	.Of external fluid or means
151	..Defrosting	178	..Diverse control or response
152	...Limited area, e.g., preferred zone	179	...Plural external fluids or means controlled
153	...By storage compartment closure actuated means	180	...External fluid and refrigeration producer
154	...By energy input actuated means	181	....Condenser cooling fluid flow
155	...Including time or program actuator	182	....Sequential
156	...By temperature	183	..Cooling fluid for heat rejecter, e.g., condenser
157	.Time or program actuator	184	...By refrigerant
158	..Time delay of condition sensing or control operation	185	..Indirect heat transfer liquid, e.g., brine
159	.Selective heating or cooling	186	..Air controller or director
160	..Reversible cycle machine	187	...Damper between storage compartments
161	.With correlated manual or external operator and condition sensing means, e.g., cutoff or reset	188	..By lever, e.g., float-controlled valve
162	..Manual initiate with sensor terminate	189	..By fluid flow, e.g., check valve
163	..Selective	190	.Refrigeration producer
164	..Manual reset or sensor operates additional element	191	..Of or by jet-type compressor
165	.Solidified gas	192	..Lubrication
166	..Diverse control or response	193	...Of or by compressor
167	..Of heater, heat transmitter or secondary fluid	194	...Lubricant aspirator in evaporator liquid level control chamber
168	..By temperature	195	..Impurity removal
169	.Vacuumized chamber with open outlet	196.1	..Bypass, e.g., compressor unloading
170	..Evacuating means, e.g., jet pump	196.2	...For plural compressor cylinders
171	.Gas-liquid contact cooler, fluid flow	196.3	...Direct bypass of compressor
172	.Air compressor, cooler and expander	196.4	...Condensor bypass
173	.Of external fluid reheating	197	...Of expansion zone
		198	....Of serially arranged evaporator
		199	....Through an evaporator, i.e., parallel

200	.....Individual flow controllers and sensors	228.4	...By variable speed motor or pulley type mechanism
201	..By external cooled liquid or holdover	228.5	...By variable compressor output, e.g., unloading, staging, etc.
202	..Including external thermal source modifying sensor action	229	...By external cooled gas
203	..Plural refrigerating producing elements and plural sensors	230	...By condition of power source
204	...Including expansion valve or variable restrictor	231	<b>TIME OR PROGRAM ACTUATOR</b>
205	....Plural variable restrictors in flow line	232	.Closed system sorbent type
206	.....High and low side	233	.Congelation product maker
207	..Diverse function refrigeration elements controlled by single sensor	234	.Defrosting
208	..Single refrigeration producer controlled by plural sensors	235	<b>RINK</b>
209	...Compensating or modifying	235.1	<b>UTILIZING SOLAR ENERGY</b>
210	....Expansion valve or variable restrictor	236	<b>WITH ALTERNATELY USABLE ENERGY SOURCES</b>
211	.....External condition sensor	237	<b>SEPARABLE AMBULANT COOLED ENCLOSURE AND POWER OR COOLING SOURCE</b>
212	.....Plural sensors at low side	238.1	<b>DISPARATE APPARATUS UTILIZED AS HEAT SOURCE OR ABSORBER</b>
213	...Alternative or selective sensors	238.2	.With vortex tube, thermoelectric, Stirling or air cycle
214	..Single sensor mounted or formed to respond to plural conditions, e.g., compensators	238.3	.With sorption
215	...Controlling compressor or its drive, e.g., torque or speed	238.4	.With power vapor generator
216	..Of or by evaporation zone	238.5	.With distillation, ice maker, or freeze separation
217	...Back flow or pressure regulator	238.6	.With vapor compression system
218	...Valve or restrictor by liquid lever	238.7	..Reversible, i.e., heat pump
219	....Low side float	239	<b>WITH VEHICLE FEATURE</b>
220	....Float chamber at suction line	240	.Ship
221	.....Valve isolated from float chamber	241	.Utilizing motion of vehicle
222	...Of expansion valve or variable restrictor	242	..Axle drive
223	....By external condition	243	.Vehicle contained common power supply
224	....By condition at low side	244	.Occupant-type vehicle
225	.....At or beyond evaporator outlet, i.e., superheat	245	.Melt control
226	...Compressor or its drive controlled	246	<b>DISPLAY TYPE</b>
227	....By conducted evaporator temperature	247	.With means dispersing or evaporating liquid into atmosphere
228.1	..Compressor or its drive controlled	248	.Means removing or preventing condensate on transparent panel
228.2	...For ice or ice cream maker	249	.With feature extraneous to cabinet or cooler
228.3	...By refrigerant pressure	250	.With material conveyer or transporter, e.g., for ice or goods
		251	.Stepped, e.g., shelves
		252	.Plural storage compartments
		253	..Formed by hollow imperforate cooled partition
		254	..Including nondisplay storage compartment

255	.With air controlling or directing means	281	.With porous or foraminous atmospheric condensate receiver
256	..Spaced elongated air inlet and outlet type, e.g., air curtain	282	.Means contacting heat absorber with fluid strange to system
257	.Bottom cooling means, e.g., cooled floor	283	.Moisture condensing means distinct from principal heat absorber
258	<b>WITH MEANS FORMING NON-COOLED WORK SURFACE, E.G., COUNTER, TABLE, SIDEBOARD</b>	284	.Wiper or scraper
259.1	<b>STRUCTURAL INSTALLATION</b>	285	.Retainer or flow director for atmospheric condensate
259.2	.With electrical component cooling	286	..Adjustable position or selectively usable
259.3	.With body applicator	287	..Wetted inner surface type refrigerator
259.4	.With evaporative type cooler	288	..With flow director directing condensate to retainer
260	.Geographic, e.g., subterranean feature	289	...Retainer exterior of refrigerated space
261	.Article of furniture, e.g., bed cover or canopy	290	..Plural distinct flow directors acting in parallel
262	.Window connected or mounted	291	..Condensate retainer
263	.Vertical partition or wall mounting feature	292	<b>WITH MEANS FOR CHARGING CLOSED REFRIGERATION PRODUCING SYSTEM</b>
264	<b>WITH ILLUMINATING OR RADIANT ENERGY MEANS</b>	293	<b>HAND MANIPULABLE TOOL</b>
265	<b>COMPARTMENT ACCESS OR USE AND AIR BLOCKING</b>	294	<b>CONTAINER CUTTER OR PUNCH-TYPE OPENING MEANS</b>
266	.Including article conveyer or transporter	295	<b>RESILIENTLY SUPPORTED POWER AND/OR HEAT REJECTING ELEMENT</b>
267	<b>INTERLOCKED DIVERSE FUNCTION ELEMENTS</b>	296	<b>MUFFLER OR SOUND DAMPENER</b>
268	<b>VACUUMIZED CHAMBER WITH OPEN VAPOR OR GAS OUTLET</b>	297	<b>EXTERNAL SUPPORT FOR REFRIGERATOR HOUSING</b>
269	.Including sorbent agent	298	<b>WITH REPAIR, ASSEMBLY OR DISASSEMBLY MEANS</b>
270	.System, i.e., multiple treating or fluid handling means	299	.Detachable valve and coupling
271	<b>ATMOSPHERE AND SORBENT CONTACTING TYPE</b>	300	.Means releasing mold from support
272	<b>WITH MEANS PREVENTING OR HANDLING ATMOSPHERIC CONDENSATE RELATIVE TO HEAT ABSORBER</b>	301	..With grid or cube release means
273	.Operating on insulation, e.g., vent to refrigerated compartment	302	.Sliding or rolling on guide means
274	.With means to add moisture to cooled space	303	<b>WITH CLEANING MEANS FOR APPARATUS</b>
275	.By external heater	304	<b>MATERIAL COOLING MEANS INCLUDING GAS-LIQUID CONTACTOR</b>
276	..Heating principal heat absorber, e.g., evaporator	305	.Cooling heat rejector of refrigeration producer
277	.Means utilizing heat developed by refrigeration producer	306	.Means feeding gas into pressurized receiver
278	..Bypassing or reversing internal fluid flow	307	.Submerged gas inlet
279	..Means conducting atmospheric condensate to heat rejecter	308	..Drop tube type
280	...Pump or thrower for condensate	309	.Gas recirculated relative to enclosure
		310	.Fluid recirculating means
		311	.Diverse treating means
		312	..Ice holder and ice melt-gas contactor

313	...Elongated vertical passage for melt and air	336	<b>MATERIAL HANDLERS OF DIVERSE TYPES</b>
314	.With gas forcing or directing means	337	<b>COOLED ARTICLE STORAGE COMPARTMENT AND COOLED ISOLATED MATERIAL HANDLER</b>
315	.Porous wall liquid container or flow line	338	.Liquid container or flow line within cooled enclosure
316	.Porous cover member	339	..Including inlet flow line connection
317	<b>WITH SEPARATOR-CLARIFIER FOR COOLED FLUID OR ICE-MELT</b>	340	<b>MEANS PRODUCING SHAPED OR MODIFIED CONGEALED PRODUCT</b>
318	.For liquid	341	.With article press means
319	..Isolated from coolant	342	.With means for working congealing material, e.g., beater
320	<b>WITH COMMINUTOR OR CUTTER</b>	343	..Diverse blades
321	.Including means utilizing product	344	.With product receiving and storing means
322	<b>DISPARATE SERIALY ARRANGED PRODUCT TREATING APPARATUS</b>	345	.Freezing surface mounted for movement during freezing
323.1	<b>WITH INTERNAL-COMBUSTION ENGINE</b>	346	..Drum
323.2	.With cooling apparatus other than gas compressor	347	.With raw material projector, e.g., spray
323.3	.With electrical motor drive	348	.With means to precool or recirculate raw material
323.4	.With clutch or variable speed transmission controlling compressor drive	349	.Thawing means
324.1	<b>REVERSIBLE, I.E., HEAT PUMP</b>	350	..Attached to hand-manipulable mold
324.2	.With cooling apparatus other than gas compressor	351	..Electrical heater
324.3	.With product treatment	352	..Means using refrigerant or coolant as heating fluid
324.4	.With refrigerant collection and intermittent discharge	353	.Heat absorber with product remover
324.5	.With atmospheric condensate removal or prevention	354	..Moving scraper
324.6	.With flow control or compressor details	356	.Mold with means to absorb heat, e.g., brine tank
325	.External fluid flow reversed	371	<b>PORTABLE, COMMODITY-CONTAINING</b>
326	<b>CONVERTIBLE</b>	372	.Mutually supported commodity and solid coolant
327	.Storable or variable capacity ice bunker	373	<b>LIQUID CONTACTING DISCRETE COMMODITY</b>
328	..Bunker wall movable to chamber wall	374	.With article conveyer or transporter
329	.Movable partition within cooled compartment	375	..With liquid recirculating means
330	<b>WITH REFRIGERANT OR COOLANT MANUFACTURING MEANS</b>	376	.With liquid recirculating means
331	<b>COMBINED</b>	377	<b>ARTICLE HOLDER MOUNTED ON DOOR OR PIVOTED PARTITION</b>
332	<b>DIVERSE SYSTEMS, E.G., ICE AND MECHANICAL</b>	378	<b>ARTICLE MOVING MEANS</b>
333	.Primary and secondary dependent circuits	379	.Solid refrigerant
334	..Secondary evaporator contacting inner liner, e.g., two zone cold wall	380	.Continuous longitudinal-type conveyor
335	<b>PLURAL PAIRED DIFFERENT FUNCTION REFRIGERATION PRODUCING ELEMENTS, E.G., CASCADE</b>	381	.Rotary about fixed axis, e.g., rotary shelf or scraper
		382	.Drawer, tray or track-guided type; horizontally movable

383	<b>MOVABLE THERMAL MEANS VARYING HEAT TRANSMISSION</b>	411	...With additional means causing flow, e.g., blower
384	<b>COOLER UTILIZING SOLIDIFIED GAS</b>	412	...Inlet and outlet ports
385	.Sublimed gas entering insulation or within hollow wall	413	..Means verging gas streams within storage space
386	.Means cooling withdrawable liquid	414	...Gas flow forcing means
387	.External as circulator or director	415	...Space cooler units in separate streams
388	.Means dispersing sublimed gas into cooled enclosure	416	....Above storage space and adjacent opposed walls
389	<b>WITHDRAWABLE LIQUID, E.G., DISPENSER</b>	417	..With imperforate partition forming storage compartments
390	.With plural liquid outlets or sources, e.g., distributing system	418	..Foraminous gas distributor flow connected to cooler unit
391	.With withdrawn liquid receiver	419	..Gas forcing means
392	.With agitator for withdrawable liquid	420	..Directed relative to ice container
393	.With intermediate indirect heat transfer fluid container or conductor	421	...Foraminous wall or bottom ice container
394	.Refrigerant evaporator surrounding or within a container	422	....Melt collector over storage space
395	..Between cooled liquid container and insulation	423	.....Storage space along container side
396	.In indirect heat exchanging relationship to coolant	424	...Gas flow passage means under ice container
397	..Barometric feed-type liquid container	425	.Gas flow through ice compartment contacting ice
398	..Cooled liquid container supporting ice	426	.Gas forcing means, e.g., cooler unit
399	..Helical or spiral coil	427	..Plural gas inlets, e.g., recirculated and fresh air
400	..Ice holder and cooled liquid container concentrically nested	428	..Means directing gas over heat rejector
401	<b>AIR COMPRESSOR, COOLER AND EXPANDER TYPE</b>	429	...Unitarily driven plural blowers
402	.Motor-type expander	430	<b>INTERMEDIATE FLUID CONTAINER TRANSFERRING HEAT TO HEAT ABSORBER OR HOLDOVER</b>
403	..Reciprocating element-type motor, e.g., piston	431	.Side-by-side or superimposed cooled compartments
404	<b>GAS CONTROLLER OR DIRECTOR</b>	432	..Different temperature arrangements
405	.Isolated gas compartment, e.g., cold air jacket	433	..With top access to each compartment, e.g., ice cream cans
406	.Gas passage over or through indirect heat-transfer container or holdover	434	.Flow line connected transfer fluid supply and heat exchanger
407	.Cooled gas directed relative to cooled enclosure	435	.With indirect fluid pump or agitator
408	..With adjustable gas flow controller	436	.Connected distinct sections for indirect fluid
409	...For exterior port	437	.Non-liquid heat accumulator
410	..Exterior port, i.e., ventilating	438	.Forming cooled storage compartment



439	.Unitary jacket surrounding coolant line	467	<b>REFRIGERATION PRODUCER</b>
440	<b>COOLED ENCLOSURE</b>	468	.With lubricant handling means
441	.Plural cooled compartments	469	..Of unitary motor-compressor in casing
442	..Coolers in parallel for plural compartments	470	..Lubricant separator
443	..Cooler integral with or forming dividing wall	471	...At evaporator or evaporator-discharge line
444	...Exterior wall	472	....With lubricant heating means
445	...With non-dividing cooler	473	...At condenser or receiver
446	...Forms plural sides of a storage compartment	474	.With refrigerant treater
447	..Insulating dividing wall	475	..Means for discharging impurity from system
448	..Movable unit of refrigeration producing assembly	476	.Sorbent type
449	..Unit includes movable wall section, e.g., door	477	..Absorber-still, e.g., intermittent
450	...Unit includes condenser fan	478	...Evaporator-condenser unit
451	.Flowing coolant container covered by insulation means or within hollow wall of enclosure	479	...With means returning sorbent from evaporator
452	.With heat rejecting element enclosure or cooling feature	480	...With solid sorbent
453	..Heat rejector contacting enclosure wall	481	...With sorber-generator cooling means
454	..With ventilation means therefor	482	....Internal liquid flow to external cooler
455	...Forced circulation	483	..Pump means forcing gas or vapor relative to sorber
456	...Vertical flue venting bottom compartment	484	..Vapor-liquid contact in reabsorber forming liquid refrigerant
457.1	.Portable receptacle	485	..Means causing cooling fluid contact with sorber and/or condenser
457.2	..With holdover material	486	..Means cooling liquid refrigerant flow line to evaporator
457.3	...Drinking container	487	..Internally generated pressure or capillary means moving sorption liquor
457.4	...For beverage receptacle	488	...Transfer vessel, e.g., liquid trap
457.5	....For multiple receptacles	489	..Means tempering flow line between sorber and generator
457.6	..Cooled serving dish	490	..Inert gas
457.7	..Picnic/lunch box type cooler	491	...Gas-liquid contactor within inert gas circuit
457.8	..Wine server/cooler	492	....In evaporator
457.9	..Cooled by means other than ice (e.g., mechanical, electrical, absorption, cryogenic, etc.)	493	...Means cooling inert gas flow line from sorber to evaporator
458	.Access surface open to atmosphere	494	..Particular gas-liquid contact in sorber
459	.Ice support, e.g., container	495	..Sorbent vapor separator between generator and condenser
460	..Flowing ice melt heat exchanger within cooled enclosure	496	...Submerged gas-liquid contact means
461	...Lateral ice melt distributor	497	..With means to enhance separations in generator
462	..Valve or trap within ice melt flow line		
463	..Partially surrounding storage compartment		
464	..Top access to ice compartment		
465	.With particular internal element support		
466	..Resilient		

498 .Compressor-condenser-evaporator circuit  
 499 ..Unitarily movable connected units  
 500 ..Jet powered by circuit fluid  
 501 ..External fluid actuates compressor and exchanges heat  
 502 ..Diverse fluids  
 503 ..With liquid trap or disperser in suction line  
 504 ..Means to apportion refrigerant to evaporator  
 505 ..Cooling motor and/or compressor by refrigerant  
 506 ..External cooling fluid contacts heat rejector  
 507 ...Air cooled  
 508 ....Motor-compressor in common housing  
 509 ..Condensed liquid receiver, e.g., surge tank  
 510 ..Plural compressors or multiple effect compression  
 511 ..Fixed restrictor  
 512 ..Distinct vapor liquid separator and separated liquid recycle  
 513 ..Heat exchange between diverse function elements  
 515 ..Evaporator, e.g., heat exchanger  
 516 ..Enclosure forming  
 517 ...With closure  
 518 ...Surrounds inner container  
 519 ...Plural distinct sections or diverse zones  
 520 ....Shelf is evaporator  
 521 ...Shelf, shelf or receptacle support  
 522 ....Integral or attached shelf  
 523 ...Corrugated or embossed wall  
 524 ..Plural distinct sections  
 525 ...With particular flow distributor to sections  
 526 ...Serially connected  
 527 ..Flow controller or boiling expeditor  
 528 ...Adjustable controller  
 529 **REFRIGERANT OR COOLANT, STORER OR HANDLER**  
 530 .Envelope type  
 531 **MISCELLANEOUS**

**CROSS-REFERENCE ART COLLECTIONS**

900 **TRIPLE COLUMN**  
 901 **SINGLE COLUMN**  
 902 **APPARATUS**  
 903 .Heat exchange structure  
 904 ..Coiled heat exchanger  
 905 .Column  
 906 ..Packing  
 907 ..Insulation  
 908 .Filter or absorber  
 909 .Regeneration  
 910 .Expander  
 911 .Portable  
 912 **EXTERNAL REFRIGERATION SYSTEM**  
 913 .Liquified gas  
 914 **MAGNETIC OR ELECTRIC FIELD**  
 915 **COMBUSTION**  
 916 **EXPLOSION REDUCTION**  
 917 **MERCURY**  
 918 **HALOCARBON**  
 919 **ISOTOPE**  
 920 **CARBON MONOXIDE**  
 921 **CHLORINE**  
 922 **SULFUR**  
 923 **INERT GAS**  
 924 .Argon  
 925 .Xenon or krypton  
 926 **GASOLINE**  
 927 **NATURAL GAS FROM NITROGEN**  
 928 **RECOVERY OF CARBON DIOXIDE**  
 929 .From natural gas  
 930 .From nitrogen  
 931 **RECOVERY OF HYDROGEN**  
 932 .From natural gas  
 933 .From helium  
 934 .From nitrogen  
 935 **OLEFIN**  
 936 **ERICKSON**  
 937 **CHENG**  
 938 **MEHRA**  
 939 **PARTIAL FEED STREAM EXPANSION (AIR)**  
 940 .High pressure column

**FOREIGN ART COLLECTIONS**

FOR **CLASS-RELATED FOREIGN DOCUMENTS**

**DIGESTS**

DIG 1    RADIANT COOLING  
DIG 2    REFRIGERANT PUMPS  
DIG 5    AIRCRAFT COOLING  
DIG 7    VACUUM PLATES  
DIG 10   TOOL COOLING  
DIG 11   HYDRATOR RECEPTACLES  
DIG 13   INSULATION  
DIG 16   ROOF AND CEILING LOCATED COOLERS  
DIG 17   CONDENSER PRESSURE CONTROL  
DIG 19   IONIC THOMPSON EFFECT  
DIG 20   MATERIALS USED TO PREVENT  
          CORROSION IN REFRIGERATION  
          SYSTEM  
DIG 21   EVAPORATORS WHERE REFRIGERANT  
          COVERS HEAT EXCHANGE COIL  
DIG 22   FREE COOLING  
DIG 23   EXPLOSIVE DIGEST

